

IN THE CLAIMS

Please amend Claim 24 as follows:

24. (Amended) A method for the liquefaction of a feed gas which comprises providing at least a portion of the total refrigeration required to cool and condense the feed gas by utilizing

(a) a first refrigeration system comprising at least one recirculating refrigeration circuit, wherein the first refrigeration system utilizes two or more refrigerant components and provides refrigeration in a first temperature range; and

(b) a second refrigeration system which provides refrigeration in a second temperature range by work expanding a pressurized gaseous refrigerant stream;

wherein the first refrigerant system is operated by

- (1) compressing a first gaseous refrigerant;
- (2) cooling and partially condensing the resulting compressed refrigerant to yield a vapor refrigerant fraction and a liquid refrigerant fraction;
- (3) further cooling and reducing the pressure of the liquid refrigerant fraction, and vaporizing the resulting liquid refrigerant fraction to provide refrigeration in the first temperature range and yield a first vaporized refrigerant;
- (4) cooling and condensing the vapor refrigerant fraction, reducing the pressure of at least a portion of the resulting liquid, and vaporizing the resulting liquid refrigerant fraction to provide additional refrigeration in the first temperature range and yield a second vaporized refrigerant; and
- (5) combining the first and second vaporized refrigerants to provide the first gaseous refrigerant of (1);

wherein vaporization of the resulting liquid in (4) is effected at a pressure lower than the vaporization of the resulting liquid refrigerant fraction in (3), and wherein the second vaporized refrigerant is compressed before combining with the first vaporized refrigerant.